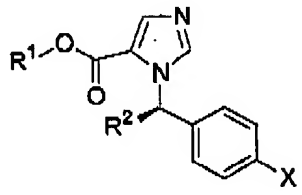
In the Claims:

1. (Cancelled)

2. (Currently Amended) ~~The~~ A compound ~~of claim 1,~~ having the formula (IA)

(IA)



wherein

R^1 is linear or branched C_1-C_4 alkyl, optionally substituted with a halogen selected from F, CL, I or Br;

R^2 denotes an alkyl group containing 1 or 2 carbon atoms; and

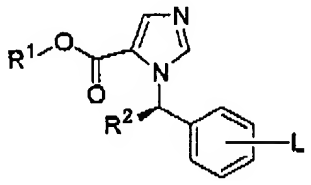
X is a halogen ~~selected from the group consisting of I, BR, Cl and F~~ a radioactive halogen selected from the group consisting of ^{123}I, ^{124}I, ^{125}I ^{131}I, ^{76}Br, ^{82}Br or ^{18}F..

3. (Cancelled)

4. (Currently Amended) The compound of claim ~~1~~ 2 wherein R^1 and R^2 are each methyl, and X is ~~non-radioactive or~~ radioactive iodine, and wherein the compound is I-metomidate (IMTO).

5. (Currently Amended) The compound of claim ~~1~~ 2, wherein R^1 is ethyl, R^2 is methyl and X is ~~non-radioactive or~~ radioactive iodine, wherein the compound is I-iodometomidate (IMTO).

6. (Withdrawn) The compound of the formula (II)



(II)

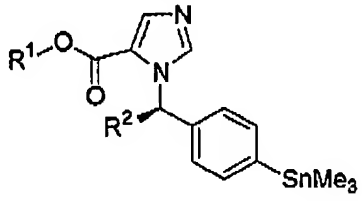
wherein

R^1 is linear or branched C_1-C_4 alkyl, optionally substituted with a halogen selected from the group consisting of F, Cl, I or Br;

R^2 denotes an alkyl group containing 1 or 2 carbon atoms; and

L represents an alkyl-stannyl group selected from the group consisting of a trimethylstannyl, triethylstannyl, tri-n-propylstannyl and tri-n-butylstannyl.

7. (Withdrawn) The compound of claim 6, having the general formula (IIA)



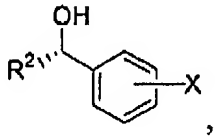
(IIA)

wherein L is a trimethylstannyl group.

8. (Withdrawn) The compound of claim 6 wherein R^1 and R^2 are each methyl, and L is a trimethylstannyl group.

9. (Withdrawn) A process for preparing the compound of claim 1, the process comprising the steps of:

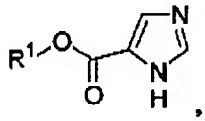
(a) providing a (*S*)-secondary alcohol of formula (III)



(III)

(b) coupling said (S)-secondary alcohol of formula (III) to an alkyl imidazole-5 [4]-carboxylate of formula (IV)

(IV)



under conditions effective to achieve the compound of claim 1.

10. (Withdrawn) The process of claim 9, wherein the (S)-secondary alcohol of formula (III) is prepared by the process further comprising the steps of:

(a) reducing a substituted phenyl methyl ketone having X as either iodine or bromine, to racemic alcohol;

(b) preparing the chloroacetate of said racemic alcohol; and

(c) performing a lipase SAM II-catalysed resolution of (*S*)-alcohol of formula III derived from the (*S*)-enantiomeric ester.

11. (Withdrawn) A process for preparing the compound of claim 2, the process comprising the steps of

(a) preparing a compound of formula (II)

(b) reacting said compound of formula (II) under conditions effective for replacing L with non-radioactive or radioactive halogen to produce a compound of the formula (I) wherein R^1 is linear or branched C1-C4 alkyl, and is optionally substituted with a halogen selected from F, CL, I, Br; R^2 denotes an alkyl group containing 1 or 2 carbon atoms; and x is non-radioactive or radioactive halogen.

12. (Withdrawn) The compound of claim 4 having the structure ^{123}I-IMTO, ^{123}I-ETO, ^{125}I-IMTO, ^{125}I-ETO, ^{131}I-IMTO, ^{131}I-ETO, ^{124}I-IMTO, ^{124}I-ETO, ^{76}Br-MTO, ^{76}Br-ETO, ^{82}Br-ETO, ^{18}F-MTO, ^{18}F-ETO,, I-MTO (non-radioactive iodine), preferably ^{123}I-ETO or most preferably ^{131}I-ETO.

13. (Withdrawn) The compound of claim 1, wherein X is a radioactive halogen, especially bromine.

14. (Currently amended) The compound of claim ~~1~~ 2, wherein R1 is ~~non-radioactive or~~ radioactive 2-fluoroethyl~~, preferably radioactive~~.

15. (Withdrawn) A method for the in vivo detection of receptor positive tissue and tumors of adrenal cortex in persons with adrenal pathology, said method comprising administering the compound of claim 1 to said person with adrenal disease, and wherein a radiotracer is selected from the group consisting of gamma or positron-emitting halogens.

16. (Withdrawn) The method of claim 15, wherein the adrenal-derived tumor is not anatomically confined to the adrenal glands.

17. (Withdrawn) The compound of claim 5 having the structure ^{123}I-IMTO, ^{123}I-ETO, ^{125}I-IMTO, ^{125}I-ETO, ^{131}I-IMTO, ^{131}I-ETO, ^{124}I-IMTO, ^{124}I-ETO, ^{76}Br-MTO, ^{76}Br-ETO, ^{82}Br-ETO, I-MTO (non-radioactive iodine), ^{123}I-ETO or ^{131}I-ETO.

18. (Canceled)